

ABSTRACT OF THE DISCLOSURE

Disclosed is a method of down-regulating the expression of a gene in an animal, wherein a pharmacological formulation comprising a chimeric oligonucleotide complementary to the gene is orally administered to an animal. The oligonucleotide administered has at least one phosphorothioate internucleotide linkage and at least one alkylphosphonate, phosphorodithioate, alkylphosphonothioate, phosphoramidate, phosphoramidite, phosphate ester, carbamate, carbonate, phosphate triester, acetamidate, or carboxymethyl ester internucleotide linkage.

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